

**Paula Findlen, "Calculations of faith: mathematics, philosophy, and sanctity in 18th-century Italy (new work on Maria Gaetana Agnesi)". *Historia Mathematica* 38 (2011), 248-291**

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*Published in:*  
Zentralblatt MATH

*Publication date:*  
2012

*Document Version*  
Publisher's PDF, also known as Version of record

*Citation for published version (APA):*  
Høyrup, J. (2012). Paula Findlen, "Calculations of faith: mathematics, philosophy, and sanctity in 18th-century Italy (new work on Maria Gaetana Agnesi)". *Historia Mathematica* 38 (2011), 248-291. *Zentralblatt MATH*, (Zbl 1232.01008).

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Zbl 1232.01008

**Findlen, Paula****Calculations of faith: mathematics, philosophy, and sanctity in 18th-century Italy (new work on Maria Gaetana Agnesi).** (English)

Hist. Math. 38, No. 2, 248-291 (2011). ISSN 0315-0860

<http://dx.doi.org/10.1016/j.hm.2010.05.003><http://www.sciencedirect.com/science/journal/03150860>

Findlen's article was originally planned as an essay review of three books: (1) [*A. Cupillari*, A biography of Maria Gaetana Agnesi, an eighteenth-century woman mathematician. Lewiston, NY: Edwin Mellen Press (2007; Zbl 1228.01037)], (2) [*F. Minonzio*, Chiarezza e metodo. L'indagine scientifica di Maria Gaetana Agnesi (2006)], and (3) [*M. Mazzotti*, The world of Maria Gaetana Agnesi, mathematician of God. Johns Hopkins Studies in the History of Mathematics. Baltimore, MD: Johns Hopkins University Press (2007; Zbl 1137.01023)]. Her short summary of their character (p. 284f) is worth quoting:

"Both Minonzio and Cupillari have fully embedded Agnesi in the history of mathematics, giving us a far more complex understanding of the intellectual traditions from which she emerged and to which she contributed. Minonzio offers us the most detailed account to date of the Italian tradition of mathematical textbooks in the 18th century, greatly enhancing our understanding of Agnesi's *Analytical Institutions* as a contribution to this project [...]. Cupillari instead offers us the texts themselves. She has edited a well-chosen set of excerpts from the *Analytical Institutions* and combined them with the first English translation of Frisi's biography [...]. She additionally offers readers a practicing mathematician's view of the nature of Agnesi's accomplishment. [...].

Mazzotti takes an entirely different approach. His biography [...] is more a biography of a moment than of an individual. In his hands, Agnesi becomes a window into a largely forgotten mentality and a relatively impenetrable world. Mazzotti is especially concerned with the reconstruction of Agnesi's worldview. He [...] emphasizes the thematic potential of this material for making comprehensible the nature of her learning, its meaning to her society, and the degree to which she emerged as the product of familial ambition, clerical scholarly networks, and perhaps a certain degree of personal ambition. [...] While not designed to be a comprehensive portrait of Agnesi, Mazzotti's treatment of her is by far the most sophisticated biography that we have of this fascinating woman. [...]."

However, the preceding 36 pages constitute an independent synthesis, building not only on the three books (not) under review but also on Findlen's own extensive work on the period, on the environment and on Agnesi herself, supported by a bibliography of 135 items. Its general tenor is in line with what she says about Mazzotti, and gives a picture of Agnesi as an immensely more impressive person than, for instance, Edna Kramer's hagiography in *Dictionary of Scientific Biography* (not to speak of those writers who get intrigued by misunderstanding *versiera*, "curve", in the Tuscan sense of "Devil's wife" etc., and misattribute the invention and the name of the curve to Agnesi).

We get a sensitive analysis of Agnesi's childhood and early youth, as an intellectual prodigy amply provided with tutors and performing in the ambitious (merchant and newly ennobled) father's evening salon – culminating with the publications of her *Propositiones philosophicae* in 1738 (when she was 20), which shows familiarity with the latest discussions in natural philosophy – and a description of her active involvement in erudite discussions in the following years (that the Archbishop of Milan used her as a theological referee in a difficult matter when she was 24 is only cited in an odd corner of the article from Anton Francesco Frisi's biographical *éloge*). We next follow her withdrawal from salon society from the early 1740s onward and the production during the same years of the *Institutioni analitiche*, with description of the personal interactions involved. In the period surrounding and following the publication in 1748 the circulation of copies to those that might appreciate the work or further the interest of others is analyzed, showing clearly that Agnesi's weariness of salon exhibition did not prevent her from seeking scholarly recognition; a letter unknown to Mazzotti suggests that she herself solicited that Papal recommendation which caused her to be appointed honorary professor at the University of Bologna.

Agnesi's retreat also from the world of learning and her dedication to charitable work from the early 1750s onward is well analyzed (following Mazzotti), not as a psychological paradox nor as a result of failing recognition but as being concordant with her own inclinations and with the fact that her main intellect context had always consisted of enlightened erudite clerics. However, as also documented by Findlen, Agnesi's own retreat did not prevent her younger contemporaries (not least Paolo Frisi and his brother Antonio Francesco Frisi, whose biographical *éloge* from 1799 was mentioned above) from referring to her intellectual accomplishment as an example, and from contrasting her implicitly with an *ancien régime* model which they rejected.

The end of the article follows the further historiography of Agnesi, and ends by pointing to what remains to (but can) be done.

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*Keywords* : Agnesi; *Instituzioni analitiche*; Catholic enlightenment; women in mathematics; historiography

*Classification* :

\*01A50 Mathematics in the 18th century

01A70 Biographies, obituaries, personalia, bibliographies

01A85 Historiography